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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/30/2005

Toru Kohda

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1800

7590 06/01/2007  
Brinks Hofer Gilson & Lione  
P O Box 10395  
Chicago, IL 60610

EXAMINER

RIPLEY, JAY R

ART UNIT	PAPER NUMBER
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3679

MAIL DATE	DELIVERY MODE
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06/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,629	<b>Applicant(s)</b> KOHDA, TORU	
	<b>Examiner</b> Jay R. Ripley	<b>Art Unit</b> 3679	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09/30/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/30/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### ***Information Disclosure Statement***

2. The listing of references in page 3, paragraph 0005, of the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second spring as recited in claim 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

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even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it contains 217 words in 16 lines.

Correction is required. See MPEP § 608.01(b).

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6. The abstract of the disclosure is further objected to because reference characters denoting technical features of the instant invention are not in parentheses. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. In regard to claim 1, it is recited in lines 41-44, “wherein when said coupling end of said plug is brought into engagement with said locking element during advancement of said plug, said inclined surface is moved to a radially outward position relative to said locking element”. It is unclear if the recitation is meant to claim the limitation that the inclined surface physically moves radially outward or if the point of contact between the inclined surface and the locking element moves radially outward. For the purposes of examination, the Examiner takes the position that the point of contact between the inclined surface and the locking element moves radially outward.

10. In regard to claim 3, it is recited in lines 41-44, “wherein when said coupling end of said plug is brought into engagement with said locking element during advancement of said plug, said inclined surface is moved to a radially outward position relative to said locking element”. It is unclear if the recitation is meant to claim the limitation that the inclined surface physically moves radially outward or if the point of contact between the inclined surface and the locking

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element moves radially outward. For the purposes of examination, the Examiner takes the position that the point of contact between the inclined surface and the locking element moves radially outward.

11. In regard to claim 7, it is recited in lines 40-43, “wherein when said coupling end of said plug is brought into engagement with said locking element during advancement of said plug, said inclined surface is moved to a radially outward position relative to said locking element”. It is unclear if the recitation is meant to claim the limitation that the inclined surface physically moves radially outward or if the point of contact between the inclined surface and the locking element moves radially outward. For the purposes of examination, the Examiner takes the position that the point of contact between the inclined surface and the locking element moves radially outward.

12. In regard to claim 9, it is recited in lines 40-43, “wherein when said coupling end of said plug is brought into engagement with said locking element during advancement of said plug, said inclined surface is moved to a radially outward position relative to said locking element”. It is unclear if the recitation is meant to claim the limitation that the inclined surface of the physically moves radially outward or if the point of contact between the inclined surface and the locking element moves radially outward. For the purposes of examination, the Examiner takes the position that the point of contact between the inclined surface and the locking element moves radially outward.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Meeske (EP 0 351 438 A1).

15. In regard to claims 1 and 7, Meeske discloses in Figure 1 and Figure 2, below, a pipe coupling comprising

a socket and a mating plug insertable into the socket for coupling engagement,  
the socket including:

a cylindrical socket body (1) having a first through aperture extending radially therethrough (as observed in Figure 1, below);

a locking element (the ball 3 furthest from the plug in Figure 1, below) radially movable within the first through aperture, the locking element being movable between a first radial position wherein the locking element is engaged with a locking recess (7) on the plug (as observed in Figure 2 and column 2, lines 31-35) so as to inhibit disconnection of the plug from the socket and a second radial position wherein the locking element is radially outwardly displaced from the first radial position and disengaged from the locking recess (as observed in Figure 1) to allow disconnection of the plug from the socket;

a sleeve (4) disposed around the socket body and having a locking surface (as observed in Figure 1, below) adapted to hold the locking element against radial outward

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movement (as observed in Figure 1, below) and prevent movement of the locking element from the first radial position to the second radial position and an unlocking surface adapted to allow movement of the locking element from the first radial position to the second radial position, the sleeve being axially movable (as observed when comparing Figure 1 and Figure 2) between a locking position wherein the locking surface is positioned radially outwardly of the locking element and an unlocking position wherein the unlocking surface is positioned radially outwardly of the locking element; and

a spring (as observed in Figure 1, below) for biasing the sleeve toward the locking position,

the plug including:

a coupling end directed toward the socket (as observed in Figure 1, below); and

a cylindrical surface extending from the coupling end in a direction away from the socket, the locking recess (as observed in Figure 1, below) being defined on the cylindrical surface,

the coupling end of the plug being slidably engaged with the locking element located in the first radial position to cause radial outward movement of the locking element when the plug is inserted into the socket (as observed in Figure 1),

the socket characterized in that:

the socket body comprises a second through aperture (as observed in Figure 1, below) located axially closer to the plug than the first through aperture and extending radially therethrough and a sleeve actuator (as observed in Figure 1, below) disposed in the second through aperture and movable between a radially inward position wherein the sleeve actuator is

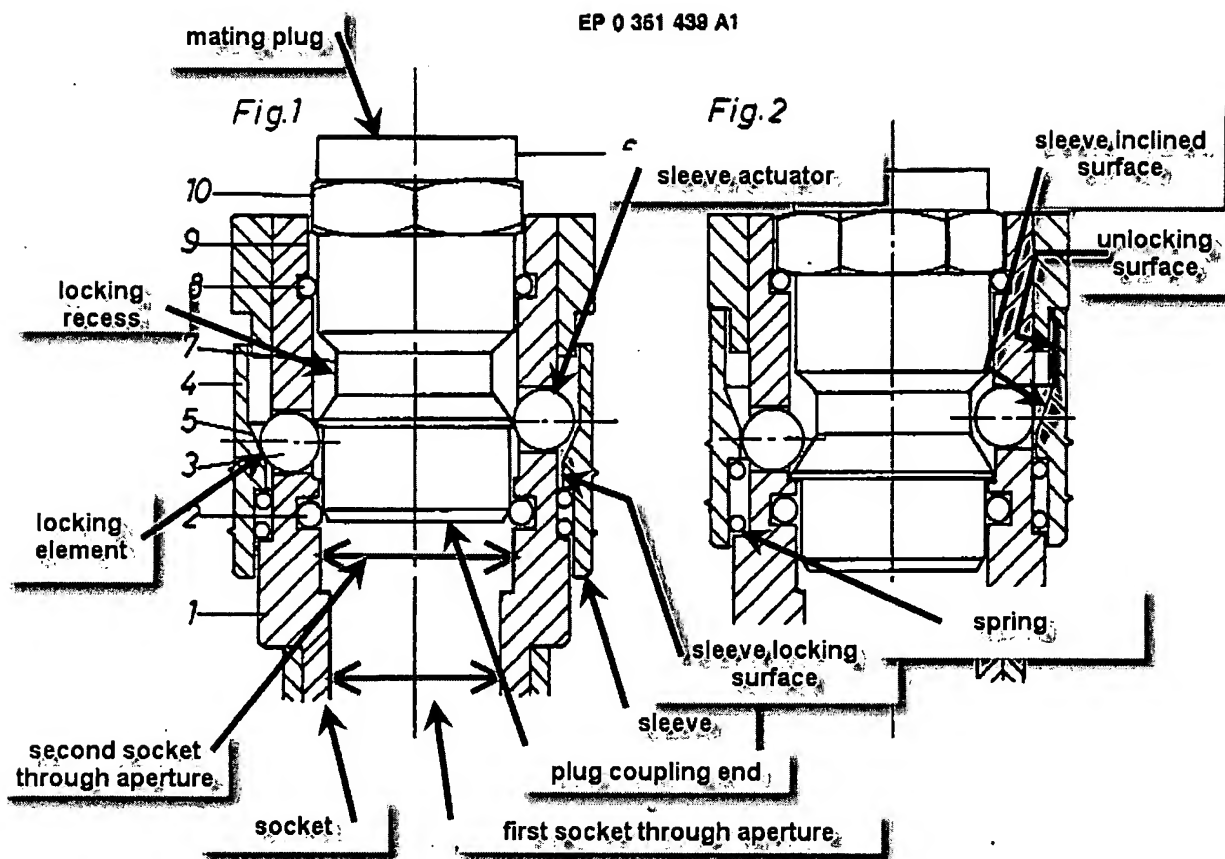


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engaged with the coupling end of the plug upon insertion of the plug into the socket and a radially outward position wherein the sleeve actuator is located radially outwardly from the radially inward position (as observed in Figure 1, below); and

the sleeve has an inclined surface (as observed in Figure 1, below) inclined radially outwardly from the locking surface toward the unlocking surface, the inclined surface being engaged with the sleeve actuator when the sleeve is located in the locking position, the coupling end of the plug being engaged with the sleeve actuator upon insertion of the plug into the socket so that the sleeve actuator is radially outwardly moved to thereby cause axial movement of the sleeve against the bias of the spring, wherein when the coupling end of the plug is brought into engagement with the locking element during advancement of the plug, the inclined surface is moved to a radially outward position relative to the locking element, the coupling end of the plug radially outwardly urging the locking element against the inclined surface of the sleeve upon further insertion of the plug, thereby causing further axial movement of the sleeve (the invention of Meeske has the structure to so perform the functional recitation as can be observed in Figure 1 and Figure 2, below).

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(Meeske Figure 1 and Figure 2)

***Claim Rejections - 35 USC § 103***

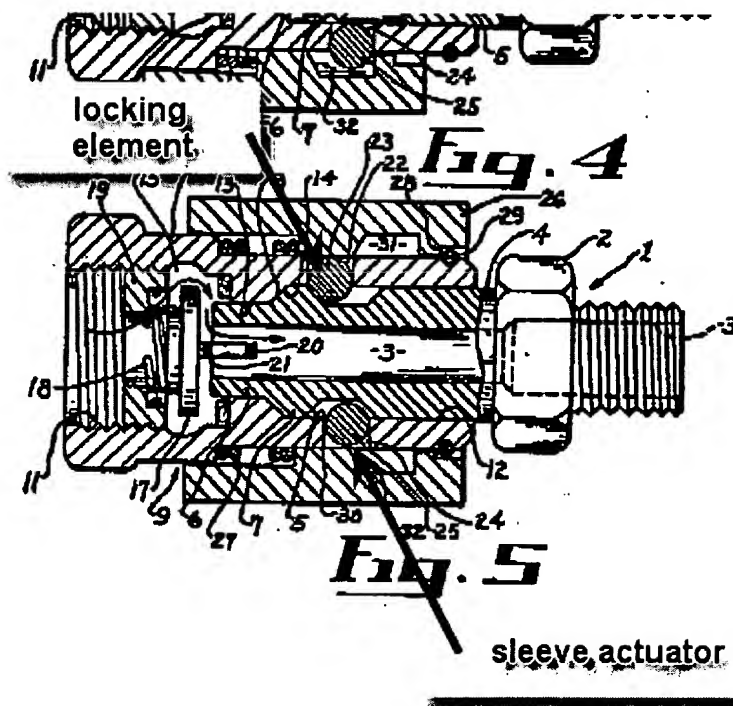
16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meeske as applied to claim 1 above, and further in view of Masek (U.S. 2,708,589).

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18. In regard to claim 2, Meeske discloses the claimed invention except for explicitly showing engagement of the sleeve actuator and the locking element with opposite locking recess circumferential side walls when the plug is fully engaged with the socket. Masek teaches a pipe coupling in Figure 5, below, wherein the sleeve actuator (25) and the locking element (23) engage with opposite locking recess (5) circumferential side walls to firmly retain the plug (1) in the socket (column 4, lines 53-55). As Masek relates to pipe couplings with sleeve actuators and locking elements, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pipe coupling of Meeske with the sleeve actuator and the locking element engaging with opposite locking recess circumferential side walls as taught by Masek to firmly retain the plug in the socket.



(Masek Figure 5)

19. Claims 3-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meeske as applied to claims above, and further in view of Wayne (U.S. 5,323,812) and Mullins (U.S. 5,255,714).

20. In regard to claims 3 and 8, Meeske discloses the claimed invention except for the sleeve comprising two sleeve elements and a stopper feature. Wayne teaches a pipe coupling with locking elements (6, 7) in Figure 1, below, wherein the sleeve comprises two elements (5, 8) to provide a quick disconnection of the coupling with a releasable locking sleeve (column 1, lines 38-41). As Wayne relates to pipe couplings with locking elements, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pipe coupling of Meeske with the sleeve comprising two sleeve elements as taught by Wayne to provide a quick disconnection of the coupling with a releasable locking sleeve.

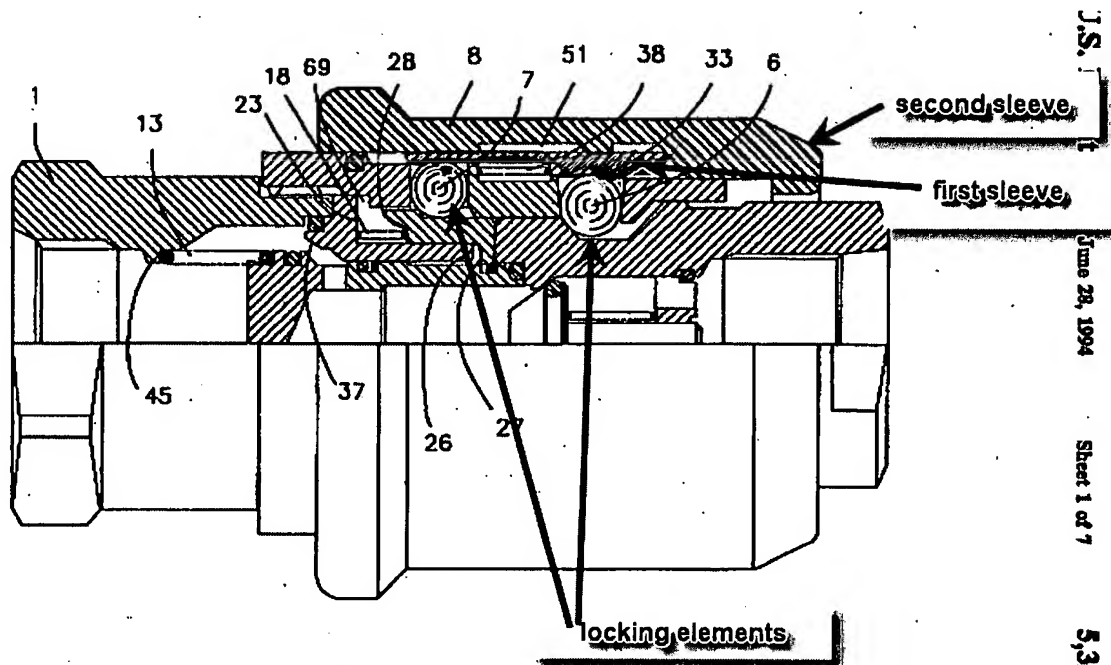
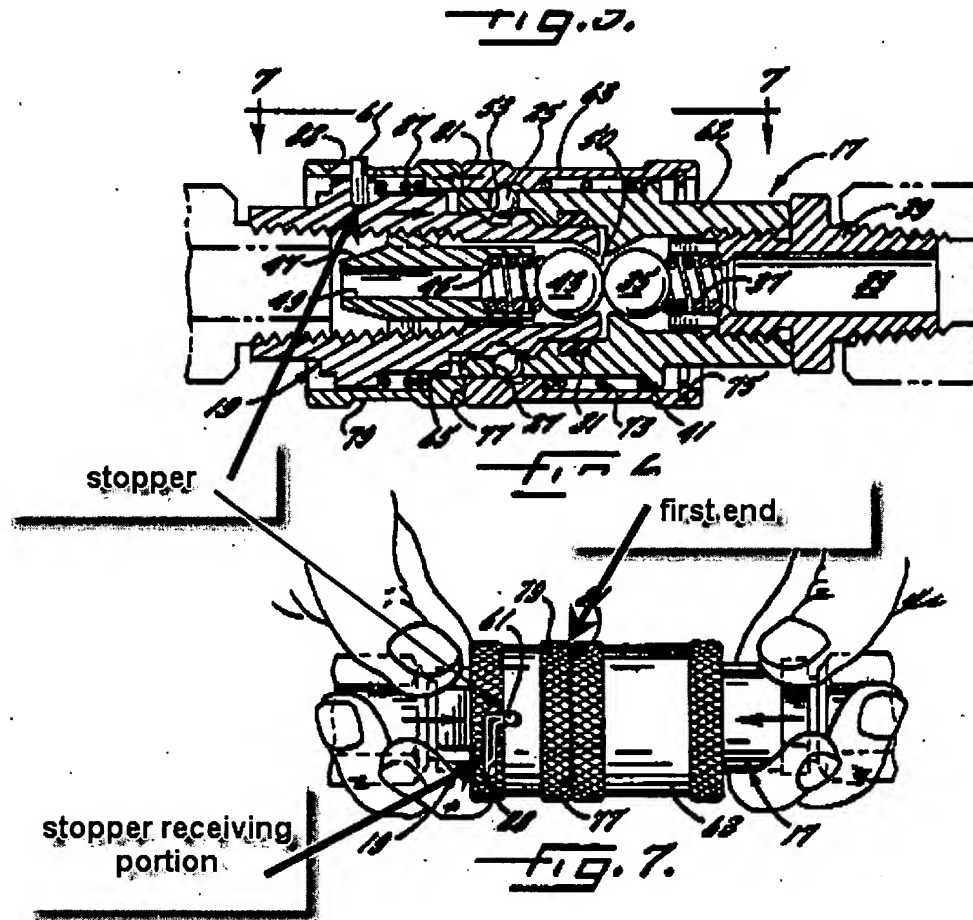


FIG. 1

(Wayne Figure 1)

21. Further in regard to claims 3 and 8, Meeske in view of Wayne provides for the claimed invention except for a stopper feature. Mullins teaches a pipe coupling with locking elements in Figure 6 and Figure 7, below, with a stopper structure (pin 61 and slot 88) arranged on a coupling member, the stopper allowing a spring biased sleeve (79) to rotate between two angular positions and prevent axial movement of the sleeve at one of the axial positions (column 7, lines 48-52), to substantially preclude inadvertent uncoupling of the plug and the socket from coaxial relation (column 7, lines 45-52). As Mullins relates to pipe couplings with locking elements, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sleeve as provided for by Meeske in view of Wayne with the stopper structure as taught by Mullins to substantially preclude inadvertent uncoupling of the plug and the socket from coaxial relation



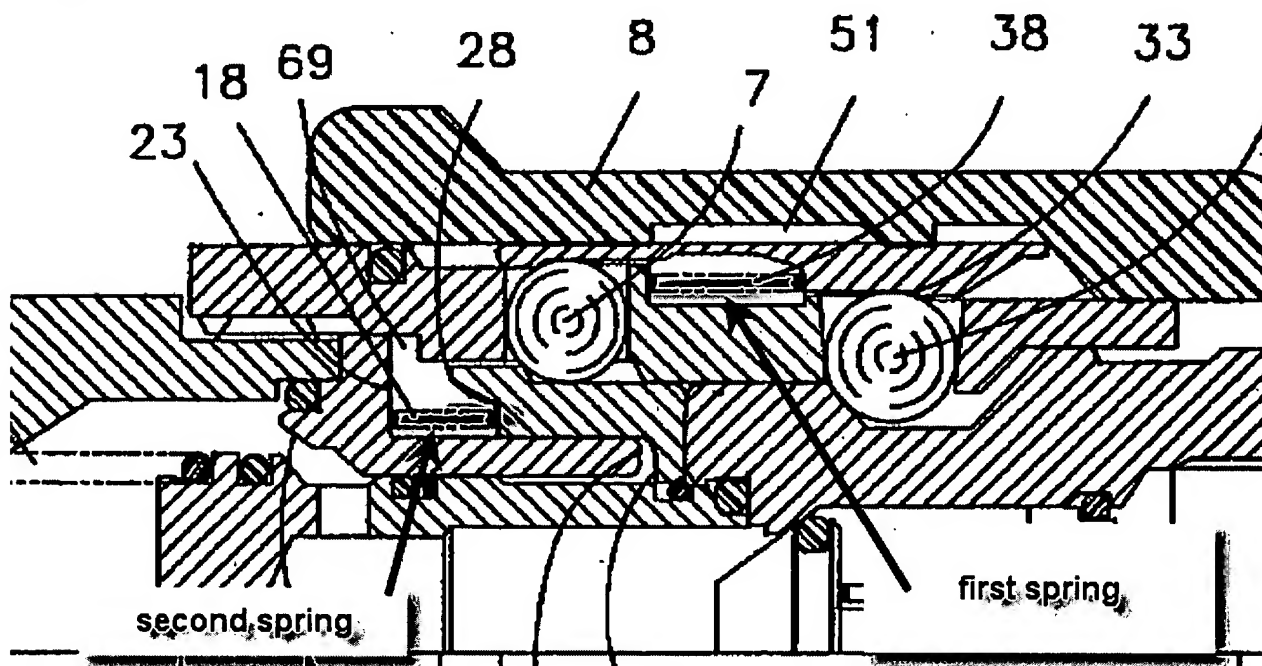
(Mullins Figure 6 and Figure 7)

22. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meeske in view of Wayne and Mullins as advanced above.

23. In regard to claim 4, Meeske in view of Wayne and Mullins provide for the claimed invention including a second spring. Wayne further teaches a second spring (18), as observed in cut-out of Figure 1, below, to urge the sleeve toward the locked position (column 4, lines 18-20). As Wayne relates to Wayne relates to pipe couplings with locking elements, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further

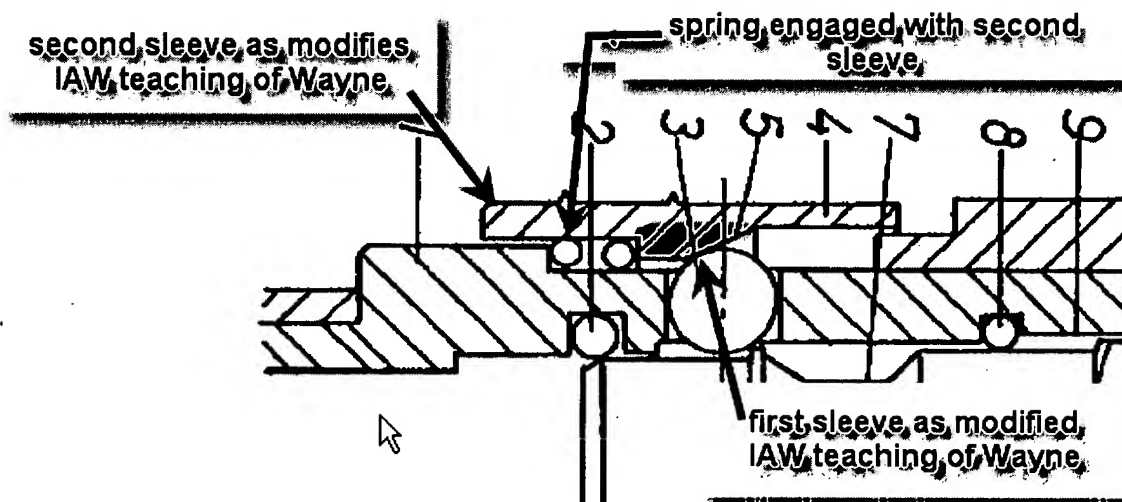
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modify the pipe coupling as provided by Meeske in view of Wayne and Mullins with a second spring as further taught by Wayne to urge the sleeve toward the locked position.



(Wayne cut-out of Figure 1)

24. In regard to claim 5, Meeske further provides for a coil spring disposed around the socket body having one end located at one position on the socket body and engaged with the first sleeve to urge the first sleeve toward the locking position, and an other end engaged with the second sleeve (a coil spring as indicated by the symbol used in Meeske Figure 1, a cut-out shown below, the recognized technical drafting symbol for a coil spring).



(Meeske cut-out of Figure 1)

25. Claims 6, 9, 10, and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Meeske in view of Wayne and Mullins as advanced above.
26. In regard to claims 6, 9, 10, and 11, Mullins, in Figure 6 and Figure 7, above, provides:  
the sleeve (79) having a first end adjacent to the plug (19) and a second end remote from the plug,  
wherein the stopper receiving portion includes a slot (88) extending from the second end toward the first end of the second sleeve,  
wherein the stopper (61) extends radially outwardly from the fitting (as observed in Figure 6)
27. Mullins is silent as to how his teachings would be applied to the structure of the pipe coupling of Meeske in view of Wayne. However, as Mullins teaches that the stopper structure is to substantially prevent uncoupling of the plug and socket (column 7, lines 45-52). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a stopper structure such that the stopper would be engaged with the second end



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of the sleeve when the sleeve is located in a first angular position, the stopper being axially aligned with the slot to allow the sleeve to be moved to a second axial position when the sleeve is placed in the second angular position to substantially prevent uncoupling of the plug and socket.

### ***Double Patenting***

28. Applicant is advised that should claim 1 be found allowable, claim 7 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

29. Applicant is advised that should claim 3 be found allowable, claim 8 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay R. Ripley whose telephone number is 571-272-7535. The examiner can normally be reached on 6:00AM - 3:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



J. R. Ripley  
29 MAY 2007



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TECHNOLOGY CENTER 3600